**Course Syllabus**

**Human Body Structures & Functions**

**Instructor: Mrs. MacKenzie Hafner**

**Dear Parent/Guardian,**

**I am so excited and honored to teach your child this year. I know I am pumped to see all the exciting opportunities and experiences this current school year will bring us. This syllabus is a way to outline the high expectations I have for all my students. These expectations will allow us to nurture a positive learning environment where every student is reaching their full potential.**

**Feel free to contact me at any time through email with any questions or concerns.**

**Please review the syllabus and sign this form. The syllabus can be found on our class Schoology page. If you would like a physical copy of the syllabus, please let me know.**

**Thank you,**

**MacKenzie Hafner**

**My child and I have read and discussed the classroom syllabus.**

Student Name (Print) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Name (Print) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

Email Address(es) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone number(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell Home Work

**Course Syllabus**

**Human Body Structures & Functions**

**Instructor: MacKenzie Hafner**

**Course Description:**

**18 weeks/1 credit**

**Prerequisite: Biology or concurrent Chemistry**

**Honors Credit Awarded**

**Prepares students for biomedical, nursing, & other health-related careers, & is prerequisite for Health Science Internship: organized to follow a logical sequence of the eleven systems of the human body with emphasis on diseases & disorders. Laboratory dissection includes anatomical study of a mammal. This course may count as a science core credit.**

**Course Objectives:**

Student Learning Objectives come from the 2023 Alabama course of study science standards.

* **From Molecules to Organisms: Structures & Processes**

1. Obtain, evaluate, and communicate information to explain how differences in cellular structure (mitochondria, cytoskeletal structure, endoplasmic reticulum, cell membrane) lead to differences in the function and organization of the four tissue types (epithelial, connective, muscular, and nervous).
2. Obtain, evaluate, and communicate information to describe how the structures of the integumentary system and its accessory organs contribute to its function.

a. Construct an explanation of the relationships between the integumentary system and other organ systems, including the body’s mechanisms for maintaining homeostasis

1. Develop and use a model to illustrate how the structures of the skeletal system contribute to its function.

a. Obtain, evaluate, and communicate information describing the growth and development of the skeletal system.

b. Construct an explanation of the relationships between the skeletal system and other organ systems, including the body’s mechanisms for maintaining homeostasis.

1. Develop and build a three-dimensional model to illustrate the structures of the muscular system, including muscle locations, origins, and insertions, and explain their roles in movement and support.

a. Model the cellular physiology of skeletal muscle, including how the cell functions in muscle contraction and relaxation.

b. Obtain, evaluate, and communicate information to explain muscle fatigue and tone in terms of muscle cell physiology.

1. Obtain, evaluate, and communicate information explaining the relationship between the structures and functions of the central nervous system and the peripheral nervous system

a. Use a model to illustrate the role of action potentials in neural transmission.

b. Construct an explanation of the role of reflex arcs, the central nervous system, and special senses in the response to stimuli to maintain homeostasis and guide behavior

c. Construct an explanation of the role of neurotransmitters in the functions and behavior of the nervous system.

d. Obtain, evaluate, and summarize scientific findings regarding the biological origin of emotions and memories in distinct regions of the brain.

1. Construct an explanation of how the interdependence of the nervous and endocrine systems maintains homeostasis.

a. Obtain, evaluate, and communicate information explaining how hormones secreted by endocrine glands help the body maintain homeostasis through negative and positive feedback loops.

b. Obtain, evaluate, and communicate information describing the role of endocrine axes involving the thyroid and gonads in controlling growth, development, metabolism, and reproduction

1. Obtain, evaluate, and communicate information describing the structure of lymph nodes and primary cells of the immune system (neutrophils, lymphocytes, monocytes, macrophages, eosinophils, and basophils) and explaining their role in inflammation and the body’s defense.

a. Obtain, evaluate, and communicate information explaining how vaccines work to stimulate immunity in the human body.

b. Construct an explanation of how the lymphatic system interacts with the immune and circulatory systems.

1. Obtain, evaluate, and communicate information explaining how the structures of the cardiovascular system are related to its functions

a. Create a model to show how a pressure gradient moves blood through the circulatory system

b. Carry out an investigation exploring the link between blood pressure and heart rate and include the role of baroreceptors and chemoreceptors in the explanation of results.

c. Construct an explanation of the cardiovascular system’s relationships with other organ systems, including the body’s mechanisms for maintaining homeostasis.

1. Obtain, evaluate, and communicate information to explain the relationship between the structures and functions of the respiratory system.

a. Construct an explanation of how the circulatory system works with respiration to transport respiratory gases.

b. Use a model to illustrate how pressure gradients move air into and out of the lungs

c. Construct an explanation of the respiratory system’s relationships with other organ systems, including the body’s mechanisms for maintaining homeostasis.

1. Obtain, evaluate, and communicate information explaining the relationship between the structures and functions of the digestive system, including absorption and chemical and mechanical digestion.

a. Construct an explanation of the roles of accessory organs (salivary glands, pancreas, and liver) in digestion.

b. Construct an explanation of the relationships between the digestive system and other organ systems, including the body’s mechanisms for maintaining homeostasis.

1. Use a model to illustrate the microanatomy of excretory structures and describe their functions

a. Construct an explanation of how the excretory system maintains homeostasis, including blood pressure and pH.

1. Use models to compare and contrast the internal and external structures of the female and male reproductive systems and their production of gametes

a. Construct an explanation of how the endocrine system influences the growth, development, and functions of the reproductive systems in males and females, including the mechanisms of hormonal birth control.

**Classroom Rules and Expectations:**

* Be on time and prepared for class every day!
* Some assignments will be accessed virtually. Therefore, make sure you have your chromebook and charger available during class time.
* Make sure to use the restroom before class starts to minimize interruptions and to provide a better learning experience.
* On time means *in your seat* when the bell rings.
* Be respectful to those around you!
* Bullying is not tolerated
* No cursing
* Make sure you clean your work space before leaving the classroom
* Do not turn on sinks or throw trash in them
* Be engaged!
* Participate in class!
* *Your phone should be out of sight during class time.*
* Never be afraid to ask for help!
* Don’t cheat!
* A student who cheats will not receive credit for the work in question. If any other student has cooperated in the cheating, that student is also considered to have cheated and will not receive credit. Cheating students will also be subject to the consequences in the disciplinary consequences in Section XXII of this CSC.
* Cheating is defined to include, but is not limited to: (a) copying someone else's work in or out of class and identifying and submitting it as your own (b) failing to quote and/or list appropriate citations for material derived from published sources (including the Internet) and identifying and submitting it as your own (c) the use of unauthorized notes, other materials, or assistance during the accomplishment of graded work in or out of class (d) any other situation in which the student attempts to or accepts credit for work not his or her own.
* Late work
* All assignments should be turned in on time
* I will accept late work one day late for half credit. After one day, no credit will be given.
* If there are extenuating circumstances, please contact me

**Technology**: Cell phones and earbuds/headphones will not be allowed to be used during classroom instruction time. Phones and earbuds/headphones will be put away in a location designated by the teacher and placed in silent mode. In secondary schools, students will have access to their phones and earbuds/headphones outside of classroom instruction time such as between classes and lunch. Failure to follow these procedures will result in a disciplinary referral to the office.

**Classroom Management Plan:**

* Verbal reprimand
* Conference with student with parent contact
* Withdrawal of privilege(s) with parent contact
* Other consequences determined to be reasonable and appropriate by the school administration.

**Accommodations:** Requests for accommodations for this course or any school event are welcomed from students and parents.

**Concerning Laptop Utilization:** Student laptops should not be hard-wired to the network or have print capabilities. 2. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers. 3. Neither the teacher, nor the school is responsible for broken, stolen, or lost laptops. 4. Laptops and other electronic devices will be used at the individual discretion of the teacher.

**Turnitin Notice:** The majority of writing assignments in this course will be submitted to Turnitin via the Schoology learning platform. The primary focus of this software is to help students become better writers and scholars. Turnitin generates a report on the originality of student writing by comparing it with a database of periodicals, books, online content, student papers, and other published work. This program will help students discern when they are using sources fairly, citing properly, and paraphrasing effectively - skills essential to all academic work.

Students will have the opportunity to review their Turnitin originality report and will have the opportunity to make revisions before submitting their work for grading. Once their work is submitted, teachers have the opportunity to view the student's originality report and grade accordingly.

**Grading Policy:**

Test grades will account for 70% of the 9-weeks grade, with the remaining 30% being determined by quiz/daily grades. The grading scale is as follows: A (90-100%), B (80-89), C (70-79), D (65-69), and F (below 65). Grades will be a reflection of mastery of the standards. Make sure all absences are excused as class work can be made up and graded for excused absences only. The final exam counts for 20% of the final grade.

**Make-Up Work Policy:**

If you miss class, all assignments will be on schoology.

Students are permitted to make up work, tests, and other assignments, activities, etc., when absences are excused. Under normal circumstances, it is expected that students will submit previously assigned work upon return to school after an excused absence. All work missed on the day(s) of excused absence(s) must be made up within **three school days** after returning to school. However, for extended excused absences when homebound services are not necessary, the teacher may grant additional time, but **not to extend beyond two weeks** past the return to school. It is the joint responsibility of student and parent to ensure a student makes up work following excused absences. Teachers may alter assignments, tests, work, activities, etc., as necessary to ensure an accurate evaluation of the student's performance after an excused absence.

**Course Materials:**

Students will need to bring the following Materials with them to class Every Day:

-Computer / Chromebook / Device

-Notebook / Binder

-Pen or Pencil

**My wish list:**

These are not required but would be very helpful for my classroom!

* Copy paper
* Lined paper
* Tissues
* Lysol wipes
* Paper towels
* pencils/pens

**Course Syllabus**

**Human Body Systems & Functions Fall 2024**

**Instructor: MacKenzie Hafner**

| **18 - WEEK PLAN\*** | |
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| **WEEK 1** | **Introduction to Human Body Systems & Functions, Directional Terms, & Biology Review** |
| **WEEK 2** | **Tissues / Histology (Objective 1)** |
| **WEEK 3** | **Integumentary system (Objective 2)** |
| **WEEK 4** | **Skeletal System (Objective 3)** |
| **WEEK 5** | **Skeletal System (Objective 3)** |
| **WEEK 6** | **Muscular System (Objective 4)** |
| **WEEK 7** | **Muscular System (Objective 4)** |
| **WEEK 8** | **Nervous System (Objective 5)** |
| **WEEK 9** | **Nervous System (Objective 5)** |
| **WEEK 10** | **Endocrine System (Objective 6)** |
| **WEEK 11** | **Cardiovascular System (Objective 8)** |
| **WEEK 12** | **Lymphatic System (Objective 7)** |
| **WEEK 13** | **Respiratory System (Objective 9)** |
| **WEEK 14** | **Digestive System (Objective 10)** |
| **WEEK 15** | **Digestive System (Objective 10)** |
| **WEEK 16** | **Urinary System (Objective 11)** |
| **WEEK 17** | **Reproductive Systems (Objective 12)** |
| **WEEK 18** | **Review for final exam & exams** |

**\* This syllabus serves as a guide for both the teacher and student; however, during the term it may become necessary to make additions, deletions or substitutions.**